

REMARKS

The Applicants have carefully considered the official action mailed on October 22, 2008, and the reference cited therein. In the official action, claims 1-24 were rejected under 35 U.S.C. § 103(a) as unpatentable over Hertling et al. (US 2002/0188935) in view of Ruf (U.S. 6,665,865) and the specification was objected to for containing trademarked terms not accompanied by their respective generic terminology to preserve the proprietary nature of the marks. By way of this response, the Applicants have amended claims 6, 14, and 22. In view of the following remarks, the Applicants respectfully traverse the rejections and the objections to the specification. Reconsideration of this application is respectfully requested.

I. Objections to The Specification

In the previous response filed on February 7, 2008, the Applicants amended paragraphs [0003], [0004], [0006], [0016], [0017], [0018], [0020], and [0021] of the specification by capitalizing the term JAVA and using the term in connection with its generic terminology. The subsequent advisory action mailed on May 14, 2008, indicated that the amendments were entered and overcame the objections to the specification. Accordingly, the Applicants believe the objections concerning uses of trademarks were repeated in error and respectfully request withdrawal of the objections to the specification.

II. Independent Claim 1

The Applicants respectfully submit that independent claim 1 is allowable over the art of record. Claim 1 is directed to a method that involves determining an age of an equivalence class and cloning the equivalence class based on the age of the equivalence class. The Applicants respectfully submit that one of ordinary skill in the art would not combine Hertling et al. and Ruf as suggested in the official action to create the claimed method.

In the official action, it is suggested that the “modification would be obvious because one of ordinary skill in the art would be motivated to perform an alias analysis on a program using a compact, equivalence-class-based representation.” *Office Action dated October 22, 2008*, p. 3, ¶ 2. On the contrary, the techniques described by Hertling et al. do not require a complex analysis such as the alias analysis of Ruf. That is, while Ruf describes “performing an alias analysis for each procedure in the closure of code to determine a polymorphic summary of each procedure, and

utilizing the polymorphic summary to specialize each procedure in the closure of code,” Hertling et al. describe analyzing class files by comparing the creation date of a required class file to a current calendar date to determine the age of the required class file. A more complex analysis such as the alias analysis of Ruf is not necessary or even useful to carry out the techniques described by Hertling et al.

In addition, Ruf describes creating a new copy of a method based on whether a new procedure signature has not been encountered before (*Ruf*, 15:65-16:3), while Hertling et al. describe replacing class files based on age (*Hertling et al.*, ¶ [0024]). The previous-encounter test of Ruf is not satisfied using the age test of Hertling et al. That is, creating a new copy as described by Ruf based on age as described by Hertling et al. would not work to create new copies as needed by Ruf. That is, the age of a class file has no bearing on whether the class file was previously encountered. Using the Hertling et al. age test as a basis for creating new copies would result in instances in which new copies of class files are never created (regardless of whether the class files were or were not previously encountered) and other instances in which many new copies of a single class file are repeatedly created (regardless of whether the class file was or was not previously encountered). Such results would be of no use due to their unpredictable nature. Thus, the Applicants respectfully submit that the motivation suggested in the official action would not lead one of ordinary skill in the art to make the suggested combination of Hertling et al. and Ruf.

Further, Hertling et al. describe replacing class files to provide the most recent versions of the class files. *Hertling et al.*, ¶ [0024] (“... the virtual machine *replaces* class files in the file system...” and “By automatically *replacing* outdated class files, the virtual machine of the invention constantly insures that the most-recent version of each class file is present in the file system.”) (emphasis added). Ruf describe creating new copies of methods. *Ruf*, 15:30-16:3. Modifying Hertling et al. in view of Ruf as suggested would cause the Hertling et al. system to create two or more copies of an outdated version of a class file rather than providing the most recent version of the class file as described by Hertling et al. This would be contrary to the techniques of Hertling et al. that are described as providing most recent class file versions by replacing old versions. The suggested combination of Hertling et al. and Ruf would lead to a system where the most recent versions of class files would not be available, but instead multiple copies of old versions of class files would be created.

The combination would not even be obvious to try, because it would go against common sense as it would have no use and would instead have adverse results. See *Hertling et al.*, ¶ [0006] and [0007] (Explaining that not providing customers with upgraded software would generate “customer ill will when software incompatibilities arise,” and further explaining that “if developers do not earnestly attempt to keep their users updated with the most-recent versions or newest class files, errors may arise when virtual machine applications need a particular class file that the user does not have.”). *Hertling et al.* teach away from keeping outdated class file versions and instead describe updating class file versions by replacing old versions of class files. Making multiple copies of an outdated version of a class file would be counterintuitive and counterproductive to the techniques described by *Hertling et al.*

In view of the foregoing, the Applicants respectfully submit that one of ordinary skill in the art would not make the suggested combination of *Hertling et al.* and *Ruf*. Accordingly, the Applicants respectfully submit that *Hertling et al.* and *Ruf* do not render independent claim 1 *prima facie* obvious and submit that independent claim 1 and all claims dependent thereon are in condition for allowance.

III. Independent Claim 9

The Applicants respectfully submit that independent claim 9 is also allowable over the art of record. Claim 9 is directed to a system that includes a processor coupled to a memory and configured to determine an age of an equivalence class and clone the equivalence class based on the age of the equivalence class. The Applicants respectfully submit that *Hertling et al.* and *Ruf* do not render claim 9 *prima facie* obvious for at least the reasons discussed above in connection with claim 1.

Accordingly, the Applicants respectfully submit independent claim 9 and all claims dependent thereon are in condition for allowance.

IV. Independent Claim 17

The Applicants respectfully submit that independent claim 17 is also allowable over the art of record. Claim 17 is directed to a machine accessible medium having instructions stored thereon that, when executed, cause a machine to determine an age of an equivalence class and clone the equivalence class based on the age of the equivalence class. The Applicants respectfully submit that *Hertling et al.* and *Ruf* do not render claim 17 *prima facie* obvious for at least the reasons discussed above in connection with claim 1.

Accordingly, the Applicants respectfully submit independent claim 17 and all claims dependent thereon are in condition for allowance.

V. Conclusion

The Applicants respectfully request reconsideration of this application. In view of the foregoing, the Applicants submit that this application is in condition for allowance. If there are any remaining matters that the Examiner would like to discuss, the Examiner is invited to contact the undersigned representative at the telephone number set forth below.

The Commissioner is authorized to charge any deficiency in the submitted payment toward payment of any fee due for the filing of this paper to deposit account number 50-2455.

In addition, if a petition for an extension of time under 37 CFR 1.136(a) is necessary to maintain the pendency of this case and is not otherwise requested in this case, the Applicants request that the Commissioner consider this paper to be a petition for an appropriate extension of time and hereby authorize the Commissioner to charge the fee as set forth in 37 CFR 1.17(a) corresponding to the needed extension of time to the above deposit account.

Respectfully submitted,

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